

Appl. No. 10/518,831
Amdt. dated June 19, 2006
Reply to Advisory Action of May 26, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-10 (canceled)

Claim 11 (previously presented) A luminaire comprising:
a light-directing element having a light emission window,

said light-directing element having a shape for directing light, which light originates from an electric light source to be accommodated, into an optical fiber system,

wherein said shape is calculated in accordance with a ray-tracing algorithm which takes into account that said light source to be accommodated is voluminous,

wherein said shape is composed of n solids of revolution of parabolic sectors, wherein adjoining parabolic sectors form an integral surface and wherein

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said parabolic sectors are parts of parabola defined by the following set of equations:

$$a(i) = (z(i) - z(i + 1)) / (x(i)^2 - x(i+1)^2)$$

$$b(i) = a(i)$$

$$c(i) = (x(i)^2 * z(i + 1)) - ((x(i + 1)^2 * z(i)) / (x(i)^2 - x(i + 1)^2))$$

wherein:

$a(i)$, $b(i)$ and $c(i)$ are polynomial coefficients of the parabolic sectors such that coordinates of each point of the reflective surface fulfill the condition:

$$a(i)*x^2 + b(i)*y^2 - z + c(i) = 0;$$

x , y , z are coordinates of the i^{th} surface of revolution of the parabola in a linear x , y , z tri-coordinate system;

the coordinates $x(i)$, $z(i)$, $x(i+1)$, $z(i+1)$ are limits of the i^{th} parabolic sector in a plane xz ;

i is an integer from 1 to n .

Claim 12 (previously presented): A luminaire according to claim 11, wherein the light-directing element is

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chosen from the group consisting of a reflector, a refractor, and a combination thereof.

Claim 13 (previously presented): A luminaire according to claim 11, wherein the light source is an electric lamp.

Claim 14 (previously presented): A luminaire according to claim 13, wherein the electric lamp is a Light Emitting Diode.

Claim 15 (previously presented) A luminaire according to claim 11, wherein the optical fiber system comprises a bundle of optical fibers.

Claim 16 (previously presented) A luminaire according to claim 15, wherein a glass rod is positioned at an end of the optical fiber.

Claim 17 (previously presented) A dynamic road-marking unit comprising a luminaire according to claim 11.

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Claim 18 (previously presented) A dynamic road-marking unit according to claim 17, wherein the luminaire has a shaped housing adapted to fit a saw-cut recess for accommodating the unit.